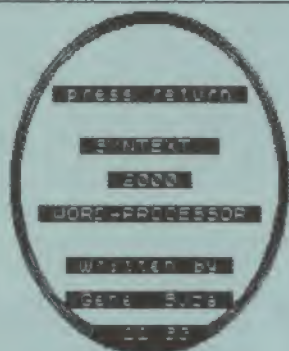


# SYNCHRO — SETTE

THE SUBSCRIPTION MAGAZINE FOR YOUR MICRO COMPUTER  
TIMEX — SINCLAIR



SHIFT (B)B	BEGINNING TEXT
SHIFT (G)B	END OF TEXT
SHIFT (Y)B	CURSOR RIGHT 8
SHIFT (T)B	CLR TO END LINE
SHIFT (I)B	INSERT BLANK
SHIFT (D)B	DELETE ONE CHAR
SHIFT (H)B	HELP MENU
SHIFT (S)B	SAVE ON TAPE
SHIFT (U)B	GET FROM TAPE
SHIFT (A)B	PRINT-OUT
SHIFT (E)B	32 BLANK SPACES
SHIFT (F)B	DELETE 32 CHAR
SHIFT (Q)B	CAPS CHANGE
SHIFT (W)B	SCROLL UP
ENTER KEY	CARR. RET.

PRESS RETURN KEY FOR TEXT

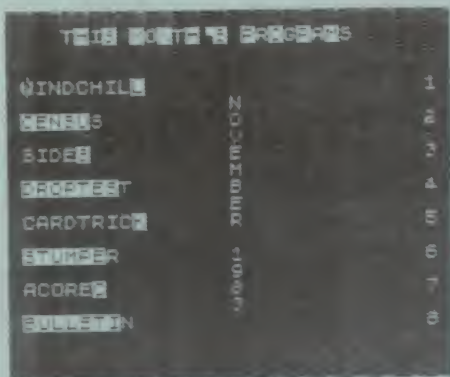
## TS 2068 WORD PROCESSING

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#### THIS MONTH'S PROGRAMS - NOVEMBER 1983

There are 7 programs on this month's cassette, not counting the LOADER program.

The program names are as they appear on the above menu, which is similar to what will appear on the screen when the LOADER program is running.

Each program is recorded only once on each side of the cassette. The first programs that can be LOADED will be of the small size followed by the larger sized programs. The other side of the cassette is a duplicate of the first side.

For you new subscribers who aren't familiar with LOADING procedures for cassette programs, follow these directions:

A - Make sure that the volume setting of the recorder is set at about 80 % maximum.

B - If you have a Bass and/or Treble control on the recorder, make sure the Treble is at maximum and the Bass is at minimum.

C - To LOAD the first program, type in LOAD "" and press the ENTER key on the computer. Then press the PLAY button of the recorder. The lead

time on the NOV/83 cassette is about 10 seconds until the first program begins.

The time needed to load the LOADER program is 1 minute & 40 seconds. When the program is loaded, a list of this month's programs will appear automatically.

Shut off the recorder when the LOADER program is loaded. Any of the listed programs can now be loaded into the computer by pressing the appropriate number on the keyboard and then pressing the PLAY key on the recorder. The loader program loads by searching for the name of the program you want and ignoring any of the other programs it may encounter along the way.

If you want to go directly to a program without waiting, we suggest you first find the tape location of the beginning of each of the programs with your recorder counter. This can be done as you go through the programs the first time, noting the tape location on the counter as each one is being loaded.

If you don't have a counter, approximate the tape position with the fast forward key just before where the program would start, and then LOAD the program with the name of the program using the format LOAD "NAME OF PROGRAM".

Some of our subscribers have told us that they could not get the programs to load by name but they would load with the double quotes. Others have told us that the loader program wouldn't load certain programs. Most have told us that all the programs could be loaded either way. Every customer's cassette is made from the same master tape, so the programs on everyone's cassettes are identical. We feel it is most probably a problem of volume adjustment or recorder design. We have noticed this situation on some of our recorders.

PROGRAMS (all programs this month are self-running  
- program's name has inverse



Last character if self-running  
RT = run time/LT = load time)  
There is an approximate 7 to 20  
second pause between programs

-----  
"WINDCHILL" LT = :27

34-47

Many of us have heard of the  
enigmatic Wind Chill temperature.  
Here, in the Chicago area, weather  
forecasters take glee in trying to  
forecast winter temperatures that  
are actually lower than what the  
thermometer specifies.

Wind Chill temperatures are  
simply the effect that wind has on  
exposed skin to give the impression  
of a temperature lower than what the  
impression would be without the  
wind. I don't take much stock in  
this effect because it doesn't take  
into account the humidity.

Enter the current Fahrenheit  
temperature and wind velocity in  
mph. and the Wind Chill Temperature  
will be displayed.

-----  
"CENSUS" LT = :38

48-64

Enter the vital data as requested  
and be astounded as the screen  
displays the vital Census data of  
the U.S., constantly up-dating it  
every few minutes to the current  
levels.

This program is designed to tune  
in to the secret coded radio  
transmissions from the U.S. Census  
Bureau to receive the data you see  
(if you are caught, it is the only  
offense still punishable by firing  
squad).

-----  
"SIDES" LT = :29

65-76

"Draw two lines that meet and  
form a right (90 degree) angle. Draw  
another line at any angle that  
intersects these two lines so that a  
triangle is formed. The sum of the  
squares of the distance of the first  
two lines, in the triangle, is equal  
to the square of the distance of the  
last line in the triangle!"

So spoke Pythagoras some time  
ago. I was there when Joe Pythagoras  
postulated this theorem in 1972 at  
the Athen's Bar & Grill in North  
Peoria. It sounded strangely  
familiar, but I couldn't put my  
finger on where I might have heard  
about it before.

Oh, well! Joe gave me the idea  
for this program. If a triangle is  
drawn where sides A and B form the  
right angle and side C forms the  
side opposite that angle, then A  
squared + B squared = C squared.  
Every now and then, all three sides  
can be represented by three even  
numbers, such as  $(3 \times 3) + (4 \times 4) =$   
 $(5 \times 5)$ .

This program starts with a blank  
screen. Don't be alarmed - wait  
about a minute. The first triplet  
series will then display (3 4 5).  
When it does, press the ENTER key  
and the program will cycle to the  
next triplet.

Great way to make a boring  
afternoon even more boring.

-----  
"DROPTST" LT = :42

77-94

If you thought the last program  
was great, you will be mesmerized by  
this one.

Picture yourself standing on the  
edge of a cliff or on top of a large  
building. You know the height and  
you drop a brick. This program will  
tell you the time in seconds that it  
takes for the brick to fall the  
required height and the resulting  
sound of it hitting the bottom to  
return for you to hear.

The program doesn't take into  
account if the brick strikes a  
passerby and the time that elapses  
before he screams.

(Side 2 Bad) (SIDE ONE bad?)

-----  
"CARDTRICK" LT = 2:21

95-139

Now it's time for you to be truly  
awed. Pick a card, any card. Just  
press the key number of which row  
it's in. After the third pass, your

card will be displayed. It never misses!

(TUTOR Cont.)

3/10 VOL!  
"STUMPER" LT = 1:17 190-195

This one is downright nasty! After about 30 seconds of blank screen, two rows of ten numbers each appear. The row on the left is yours and the one on the right is the computer's.

The object of the game is to get a point by picking one of your numbers that is larger than the one that the computer picks. The computer, however, will get the point if its number is larger.

You have an advantage - you can pick any of your available numbers. The computer, however, has to scan its row, from top to bottom, to find a larger one. If it doesn't find one, it takes the number at the top of its list.

There is an even distribution of numbers for both sides. This doesn't, however, mean that you will win 50% of the time, as you will soon see. Expect to win about one out of every 10 games, at first.

It is very addictive and after playing till about 4 in the morning, I was able to win almost 50% of the time 3/10 VOL!

166-215  
"ACOREC" LT = 2:59

This is an Accounts Receivable program with sort and print-out capabilities. It is self prompting for input of data. You can enter data for up to 100 bills. This data can be sorted by date with the oldest outstanding bills at the top of the list. Data can be edited, deleted or new data added. The file can be saved on tape and recalled at a later time. Old files can be cleared for new data entry from scratch. Printout is formatted with the numeric figures having right-margin justification.

"BULLETIN" LT = 1:59/RT = 7:20

Our bi-monthly Bulletin Board Program.

with each string separated by the "separator code", "111".

Line #420 determines the memory location of the last character that had it character CODE POKED and line #430 converts that memory location into a string variable

The only area we haven't examined is the memory locations 20005 to 20009. These locations hold the value of the memory location of the last character of the stored data. We can write a routine to add more data to the existing array held above RAMTOP by simply tacking it on starting with the next memory location beyond the one specified by the characters held in locations 20005 to 20010.

I hear the bell, so we'll have to continue next session.

I'll leave you with this poem by one of our country's founding fathers, that great Pilgrim, Miles Standish:

"We welcome friends and family as the holidays unfold.

We're thankful for the cheer and food and shelter from the cold.

But as the joyous feast unveils, our thoughts recall the word,

Temperate intake, slowly paced - don't pig out on the bird!"

Happy Holidays to all my dear friends out there - The Old Professor



The Rinconada Racetrack in Venezuela—called the most luxurious track in the world—has a swimming pool for horses.

216-247

3/10 VOL! (4)





A word processing program written by Gene Buza

Back in April of this year, we released a word processor called SYNTEXT. It was by far our most popular program. It was relatively fast, for a BASIC program, and had a lot of features found in more expensive word processors.

Many people told us it was the best on the market. The only complaints we received was that it would always right margin justify (see Editor Ramblings for fix), that the space key couldn't be used because it would break the program, and some people found the screen flash, after each character was entered, distracting.

The space/break and flash problems couldn't be overcome on the 1000 with the BASIC language (some people liked the flash because with the membrane keyboard, they could watch their fingers press the keys and not have to look at the screen directly but could still be sure whether the character was entered or not, by the flash).

With the release of the IS-2068, I am not aware of any cassette programs available, as of yet, for this computer, let alone a word processing program.

I sat down one night and started

working on one. Using the 1000 version as a base, and after many evenings working into the wee hours of the morning, I finally finished SYNTEXT-2000.

This was not a hurry-up job, however. Approximately 50 hours of programming time went into this version.

It still has many of the same features as the 1000 version, such as insertion or deletion of one or 32 blank spaces, clear to end of line, beginning of text, carriage return and the ever-favorite HELP menu.

The "end of page" command has been changed to scroll pages on the screen. SHIFT "G" takes the last line at the bottom of the screen and makes it the first line at the top of the screen with the following text being displayed. Since about 11 screen pages are available for entry (about 2 1/2 times the amount of the 1000 version), the entire text can be scrolled by in just seconds.

The user has the option, at any time, of changing the characters from upper/lower case to straight upper case and back again with the "Q" command.

Another useful command is the "scroll up" mode which is enabled with the SHIFT "Q" key. The text will scroll up one line at a time.

Command "A" is the print-out mode and it too has additional features. The user has the option to print-out the text exactly as it appears and is formatted on the screen to the 2040 printer or the 1000 version formatting option is allowed with maximum line length, left margin indentation, right margin justify or non-justify, page length and page separation.

#### TEXT ENTRY RULES

The best feature of SYNTEXT-2000, however, is the formatted printout capabilities. The program still has the unique capability of

automatically  
paragraphs.

formatting

A. When the first paragraph is started in text, it should be indented three spaces.

B. When that paragraph is ended and the next one is to be started, separate the last character of the first paragraph with two empty spaces and then start the next paragraph.

C. Do not, and I repeat DO NOT format the text on the screen if you intend to use the FORMAT mode. Let the words wraparound from end-of-line to beginning of line. If you do screen format, the printout will be incorrect. This feature alone allows from 10 to 35% more text to be entered.

The FORMAT print mode is designed to allow print-out not only on the 2040 printer but also on any printer that becomes available for the TS-2068, whether it be thermal or ink.

---

#### FORMATTING PRINTOUT

As the text is being entered (a blinking cursor shows the position of the next character to be entered), you will notice a short beep occurs after each key is pressed. This, I feel, is much better than the screen flash for character entry verification. After the text is printed, you will be asked if you want another copy. This, of course, saves you the task of re-entering the formatting data each time.

#### - HOW MANY CHARACTERS PER LINE?

This asks the user what the maximum length of a printed line should be. Keep in mind, if a printer prints a maximum of 16, 32, 40 or 80 columns, the number you enter cannot exceed this amount. If it does, overflow to the next line or some other dire circumstance may occur. However, each line is defined

as a string in its entirety, and because of this, should be able to be printed out to any printer.

#### - LEFT MARGIN SPACES?

The user is then asked how many blank spaces are to be put at the beginning of each line. Again, the user is cautioned that the number entered here when added to the previously entered number cannot exceed the total column printout capability of the printer used.

#### - RIGHT MARGIN JUSTIFY?

The user is given the option of having the last characters of each fully printed line, line up with each other or not having this condition.

#### - NUMBER OF LINES PER PAGE?

This prompt is mostly for those who have tractor/pin-feed printers that use the fan-fold paper, which of course, are not available at the time of this printing. This prompt, along with the next, allows the text to be printed in blocks with blank lines skipping over the connecting perforations of the paper. For most dot-matrix printers, the paper allows 66 lines on an 8 1/2 by 11 inch sheet. The number <60> for this prompt and <6> for the next prompt is usually sufficient.

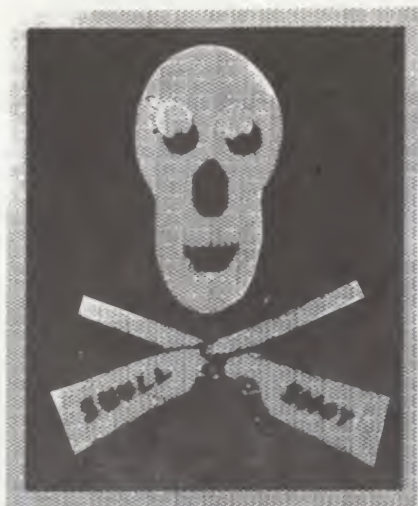
If you have a thermal or friction printer with a continuous roll of paper, enter <999> or some number that exceeds the amount of lines your text has and you'll be OK.

#### - NUMBER OF LINES BETWEEN PAGES?

Again, this is for page spacing. If and when you get a tractor feed printer, experiment to find the proper number needed. With a roll paper printer, any number will do since it is ignored when the previous number is high enough.

The user is encouraged to experiment with different format settings, no matter what kind of





Here is a neat little game for the TS-2068. It shows off some of the areas of the 2068's programming capabilities, bit-graphics mapping, HIRES (high resolution) moving graphics, screen coordinate determination and sound generation.

It is an arcade-type game where the user tries to shoot the skulls that pass over in the least amount of shots. There are 22 skulls in two rows, moving in opposite directions.

Lines 10 to 90 generate the bit-graphic character skull. The skulls you see in the program listing in line 90 only appear after the program has run. When you get to that line, get the cursor in the graphics mode (SHIFT 9). Then enter SHIFT "E" in place of each of the skulls you see and blank spaces for the rest of the string. The skulls will become part of the listing and take the place of the "E"s.

The 300 subroutine plots the projectile with line #305 determining whether a screen coordinate is being occupied by a portion of the skull, with the POINT function.

The 1000 sub-routine makes a gunshot noise which occurs when you hit the space bar. A projectile will move from the lower left-hand corner to the center of the screen. If a skull is hit, sub-routine 2000 will produce an explosion noise.

When all the skulls are gone, your score will be displayed.

Examine the binary code in lines 10 to 80 and see if you can see the picture of the skull. This game can be improved upon with colors and more moving rows of skulls or other graphics characters you may want to design such as a graphic cannon. Another good project is to program the skulls to keep moving as the projectile is in flight or to replace them with tombstones when they are hit - a good base game program to build on.

```

5 LET SK=0 LET S=0 DIM C$12
10 POKE USA "E" BIN 00111100
20 POKE USA "E"+1, BIN 01000001
30 POKE USA "E"+2, BIN 10100101
40 POKE USA "E"+3, BIN 10011101
50 POKE USA "E"+4, BIN 01000001
60 POKE USA "E"+5, BIN 01011010
70 POKE USA "E"+6, BIN 00101010
80 POKE USA "E"+7, BIN 00011000
90 LET A$=""
100 LET D$=A$
110 PRINT AT 10,0 A$ AT 7,0 D$
120 AT 0,0 "SHOTS USED = " S AT 1,0 "
130 "SKULLS SHOT = " SK IF A$=C$ AND
140 D$=C$ THEN GO TO 5000
150 LET B$=INKEY$
160 IF B$="" THEN GO SUB 300
170 LET A$=A$(2 TO 32)+B$(1) L
180 AT 10,0 D$+B$(1) TO B$(1)
190 GO TO 100
200 PRINT AT 21,0 " " GO SUB 1
210 FOR X=1 TO 100
220 IF POINT 1,1,4545=1 THEN
230 GO TO 400
240 PLOT X,1,4545
250 INK 7 PLOT X,1,4545 INK
260
270 NEXT
280 LET S=S+1
290 BEEP .5,-10 BEEP .5,-20 B
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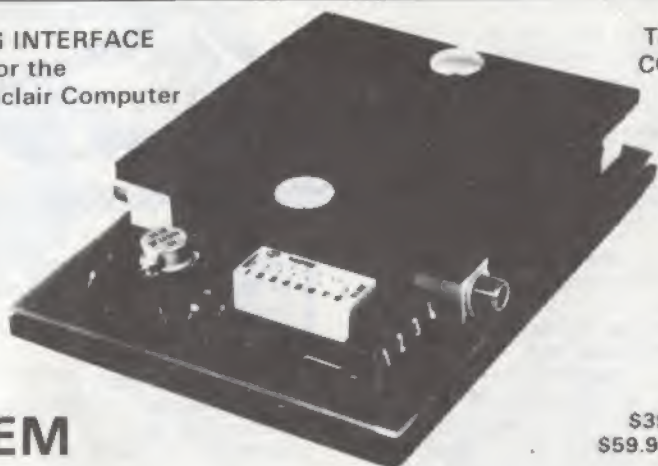
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**ANALOG INTERFACE  
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**TAPE SIGNAL  
CONDITIONER**



# VOTEM

**\$39.95 (Kit)  
\$59.95 (A & T)**

VOTEM is a complete package consisting of hardware and software that enables your computer to measure, display and record "real world" analog signals. Your computer can monitor any physical phenomenon (pressure, light, temperature, etc.) that can be represented by a DC voltage. A probe is provided for air and liquid temperature measurements.

Your computer becomes a "smart" digital voltmeter and thermometer with storage capability. Just think of the possible applications. Use VOTEM and your computer to monitor the temperature in a home energy conservation project to save money and possibly qualify for an energy tax credit on the entire system.

VOTEM also amplifies and cleans up the tape signal for reliable program LOADING. The tape signal conditioner circuit will allow you to LOAD tapes with a lower volume setting on your tape recorder, resulting in less noise and more dependable LOADS. You will be able to LOAD from tapes which would previously not comply.

VOTEM requires no modifications to your computer and does not use the computer's expansion connector, leaving it free for other add-ons such as the memory pack and printer.

At only \$59.95 (assembled and tested), VOTEM is the world's most cost effective analog interface. For an even better bargain the VOTEM kit is only \$39.95. (Requires soldering and appx 2 hrs.) VOTEM comes with a detailed 35-page manual. The manual may be purchased separately for \$5 pp and applied to first purchase of a VOTEM unit. If you are not satisfied with VOTEM return within 15 days for a full refund. (Does not apply to kits.)  
**Send check or money order plus \$3 for shipping and handling.**

## VOLTAGE MEASUREMENT PERFORMANCE

Resolution	0.000044V (better than 14 bits.)
Accuracy (note 1)	+/- 0.2%
Input Resistance	250 Megohms
Range (note 2)	0 to +1V (without divider network)
Linearity	0.1%

## TEMPERATURE MEASUREMENT PERFORMANCE (specified in degrees C)

Resolution	better than 0.05
Accuracy (note 1)	+/- 0.5
Range	-25 to +125

## POWER SUPPLY REQUIREMENTS (note 3)

Operating Voltage	+8V to +15V (unregulated DC)
Current Consumption	25mA (typical) 15mA without LED

## COMPUTER REQUIREMENTS

Timex TS-1000 or Sinclair ZX81. Will also work on ZX80 (w/8K-ROM). Basic measurements and operations require only 1K of RAM memory. Instructions and Z80 source code driver routine are provided for adapting to any Z80 based computer.

## OTHER FEATURES

- \* Schmitt trigger conditioner circuitry for tape signal
- \* LED tape LOAD monitor
- \* Buffered audio output for speaker or earphone
- \* Can be used as frequency counter from DC to beyond 30KHz
- \* Functions are easily selected with 8-pole DIP switch
- \* Self-contained in attractive (1" by 3" by 4") enclosure
- \* Temperature probe for air and liquid temperature measurements
- \* Glass-epoxy circuit board and high quality components used
- \* Input connections are reliable miniature screw terminals
- \* Instructions for interfacing to any Z80 system with 1-bit input
- \* Easy-to-follow, 35-page manual can be purchased separately

## Down East Computers

P.O. Box 3096  
Greenville, N.C. 27834

Note 1: All calibration is done in software. The absolute accuracy of VOTEM will depend mainly on the choice of parameters and conversion factors used in the software. If the calibration procedures provided with VOTEM are followed then the accuracy should be as good or better than that specified above.

Note 2: The input voltage range of 0 to +1V can easily be expanded with an on-board resistor voltage divider network.

Note 3: VOTEM can be powered from the Timex/Sinclair computer's power supply. The VOTEM unit provides a power-in and power-out receptacles and also includes the proper connecting cable.



# WORD TREE - A WORD PROCESSOR FOR THE ZX-81 or TS-1000/1500

Word Tree is a word processing program intended for use on a 16K TS-1000 in conjunction with the Tree-Forth operating system. Word Tree provides the operator the ability to generate and manipulate text on his machine before it is saved on tape or printed.

After the program is loaded per instructions, RUN is achieved by entering a "W". If a VLIST is done, only one word is added to the vocabulary and that is "W", the program name for Word Tree.

If any other programs reside in memory, they will be destroyed when Word Tree is loaded. The program allows 12,416 bites for your text file. This is about 400 screen lines and over 17 screen pages.

Some of the features of Word Tree are:

- Automatic/Optional wrap-around.
- A/O right margin justification.
- Up to 250 character printed lines.
- Allows concatenation of files.
- Can be modified to use alternate printers.
- Automatic HELP menus.
- Automatic insert.
- M/C language routines for fast visual updating of display.
- Beginning of text prompt.
- Beginning of word prompt.
- Beginning of last word prompt.
- Up, down and sideways cursor prompts.

- Deletion of single character or word.
- Page scrolling, up & down.
- Special TAB prompt.
- Delete entire file.
- Screen width prompt.
- Beginning/End of text cursor prompt.
- Paragraph formatting.

The main advantage of Word Tree is the speed and control of the screen and the capability to use professional printers for more quality print-out and larger file preparation.

Word Tree sells for 19.95 with full documentation from Soft Magic Corp., 121 W. High St., Bryan, OH, 43506, 419-636-4531.

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## the Computer Tutor



### STORING DATA SEPARATE FROM THE PROGRAM PART 1

Good morning, Class! How are you?  
Getting ready for the holidays?

Today's session will be on the subject of data. We have all seen how data can be created in a program and the program can be saved with the data intact. The GOTO command can execute the program after it has been re-loaded from tape and all the data is back again.

This system works fine for many situations. But, what if we wanted to set up a monthly record of transactions such as a customer file? Let us say that we had a business where we tuck-pointed houses. Let us say that once a year, we tuck-pointed each house. Our customer file program was designed to contain our sales on a monthly basis. With the TS-1000, we must have 12 separate files for each year.

After thinking awhile, we decide it would be much more cost-efficient to try to organize our jobs where we could each day do as many as possible in the same neighborhood with the smallest amount of travel time between jobs. Well, it wouldn't be that difficult to sort each file by Zip Code or town to get the file in a type of order according to location. But we have 12 such files. It would be nice if a method existed where we could merge them.

Such a method does exist. It is simple in concept but laborious to achieve. It is not too efficient, as

far as memory is concerned, but in theory, files that already exist as variables which were generated from the same program, have the potential to be merged. Once they are merged, they can be sorted. Here's how it works:

First of all, we have to set aside an area of the TS-1000's memory for the variables to be put into. This is where the inefficiency occurs. The variables are going to exist in two places at once in the computer's memory banks. Let us say that we are going to change RAMTOP (the area of computer's memory which is the limit where which no more bytes can be entered after) to 20000. On a 16K machine, RAMTOP is preset at 32768. The computer can tell you this by PEEKing locations 16388 & 16389. If you enter "PRINT PEEK 16388 + 256 \* PEEK 16389", you will see this number displayed. To change it to 20000, we first divide 20,000 by 256 and the integer we get is 78. The remainder is 32. If we enter "POKE 16388,32" & "POKE 16389,78" and then run the previous PEEK command, we find that RAMTOP is now set to 20,000.

Anything that is put in the memory area between 20,000 and 32,768 will be unaffected by any programming commands, including NEW and CLEAR. The only way that those memory locations will have their data altered is by program crashes, shutting the machine off or if different data is entered into those areas. To prove this, enter this program:

```
10 POKE 16388,32
20 POKE 16389,78
30 PRINT "ENTER YOUR NAME :::"
40 INPUT N$
100 LET N=LEN N$
110 LET A$=STR$(N)
120 FOR I=1 TO LEN A$
130 POKE 19999+N,CODE A$(I)
140 NEXT N
150 FOR I=1 TO N
160 POKE 20001+N,CODE N$(I)
170 NEXT I
```

Let us look at this portion of the program. Assuming the length of your name does not exceed 99 characters, your name will be

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[illegible]

```

000000 NEXT I=N-1
000000 LET R1=N-1
000000 LET R2=N-1
000000 FOR I=N-1 TO 5
000000 POK R1+I TO S
000000 NEXT I
000000 FOR I=N-1 TO R1
000000 POK R2+I TO S
000000 LET R2=R2+1
000000 FOR I=N, CODE P#(1,N)

```

```

390 LET EN=EN+1
400 NEXT I
400 POKE 20000+EN,111
405 LET EN=EN+1
410 NEXT N
420 LET EN=20000+EN+1
430 LET F$(1)=STR$ EN
440 FOR N=1 TO 5
450 POKE 20004+N,CODE F$(1,N)

```

```
0000 NEXT N
0000 LET N=0
0000 LET I=0
0000 LET J=1
0000 GOTO 1000
0000 END
```

```

10 CLS
20 PRINT CHR$( PEEK (20000+N))
30 LET N=N+1
40 IF PEEK (20000+N)=111 THEN
50 I=I+1
60 IF I=R1 THEN GOTO 600
70 GOTO 520
80 PRINT
90 PRINT
10 FOR N=1 TO 22
20 PRINT R$(N)

```

22 random character strings are created by the routine from lines 40 to 220. The number total (22) is put into a character string "E\$(1)". Lines 320 to 340 POKE the CODES of the "total string" into memory locations 20000 to 20004. The 22 character strings have their character codes POKED into memory locations starting with 20010 with the routine from line #350 to #410





## Editor Ramblings

### SYNCHRO-SETTE PHASE-OUT

Due to a number of circumstances, we have decided to phase out the magazine/cassette subscription concept of Synchro-Sette. This does not mean that you will not receive the magazines you are entitled to.

The last issue won't be until October, 1984. For those of you whose subscriptions will end before that time, you will still receive the yellow renewal cards but the rate will be pro-rated for an amount only up to that cut-off date. That way you can still receive programs and information regarding Timex/Sinclair products up to a year from now.

The reasons for this decision are as follows:

- we feel a year from now, the ZX-81/TS-1000 will be all but forgotten, at least to the point where software and/or magazine sales dedicated to those computers will not be marketable. Even now, sales of software and subscriptions have dropped to next to nothing.

- the TS-1500 which would be the natural new-product outlet for the existing software because it is almost 100% compatible, is going to be sold in extremely small amounts and/or for a short amount of time.

- advertisers are not renewing contracts in our publication at this time.

- trying to incorporate the 2000 series software into our subscription tapes represents a problem that we feel can only be overcome by coming out with another magazine/cassette. This would represent a difficult situation for us at this time as it would require considerable expense.

We may come out with just a magazine or newsletter, but without the subscription cassettes. We do intend to become primarily a software house for not only the TS computers but also other popular computers as well with the emphasis on subjects of business, computer awareness and education, and lesser emphasis on games.

A year and a half ago there was a tremendous interest in the old ZX-80 computer and many persons felt slighted when the ZX-81 invaded the content of the dedicated publications. Within 6 months, that interest had all but died as the ZX-81 became more popular and cheaper.

In the last year, I have made friends with many of you personally and over the phone. One of the main reasons our magazine came late many months, was because of the phone calls. I have this problem, you see, of being somewhat of an Evangelist when it comes to the subject of computers.

I want to take this opportunity to thank each one of you for your patronage and friendship and hope in some way to keep in contact with most of you.

### 2068s ARE AVAILABLE

They're finally here. I picked one up from a McDade's store in the Chicago area (main office phone # (312) 260-2400 / 505 E. North Ave, Carol Stream, IL) on sale for \$149.97 till December 4th, 1983.

Some of the Sears stores have them in limited quantities but by the time you receive this magazine,

they may be more readily available.

Dan Parkhurst is an independent Timex dealer and is selling a limited supply of TS-2068s for \$175.00. Contact Dan at (918) 445-4424, PO BOX 14385, Omaha, NE, 68124.

#### 1500 AVAILABILITY

For those of you wondering where to get a TS-1500, Sears has them advertised in their Christmas Catalog.

#### ORDER DIRECT

Timex itself is taking orders directly for the following products:

T/S 2090 JOYSTICK	14.95
T/S 2020 PROGRAM RECORDER	49.95
T/S 2040 PRINTER/w. paper	99.95
T/S 2068 COMPUTER	199.95
T/S 1500 COMPUTER	79.95
COMMAND CARTRIDGE PLAYER	19.95
1000/1500 CARTRIDGES	19.95
2000 CARTRIDGES	29.95 TO 39.95

Contact Timex at 1-800-24 TIMEX for more information or see the latest issue of the free publication from Timex, RAMBLINGS.

#### SYNTEXT CHANGES

For those of you who have the SYNTEXT word processor for the TS-1000, change the following lines to read:

1200 1850 LET A\$=A\$( TO B) +D\$+(A\$(B+1  
TO 2847))  
1300 1950 LET A\$=A\$( TO B)+A\$(B+33 TO  
2880)  
4770 IF Y\$(1) = "Y" THEN LET B\$  
= B\$( TO K)+B\$(K TO LEN B\$)

The first two corrections allow all the text to be manipulated whenever 32 characters are inserted or deleted. The last correction overcomes the infamous non-right margin justification problem.

#### ALPHA COM PRINTERS

Alphacon, who manufactures the TS-2040 printers and will be also making the new 80 column thermal printers, is selling directly to the public. Call 1-800-227-6703 (in CA 1-800-632-7979) or write Alphacon Co., PO BOX 306, Half Moon Bay, CA, 94019. They accept over the phone, VISA/MC/AMEX.

#### 2068 WORD PROCESSOR

SYNTEXT-2000 is available now for the TS-2068. It is very easy to use and can create as many text files as you want on tape (see review this issue).

Patterned after the 1000 version, it has some pleasant additions such as page and line scrolling along with a "key-beep" for positive character entry verification. Text manipulation is a breeze and with the page scrolling feature, the entire text can be scanned in just seconds. It also holds over 2 1/2 times the amount of text that the 1000 version does. Up to 8K of text can be saved or retrieved from tape in just 47 seconds. The program itself only takes 44 seconds to load compared to 3 minutes and 23 seconds for the 1000 version.



When wrapping holiday packages, if you have an assortment of unmatched "just too small" pieces of gift paper, try combining different patterns and colors for packages that are sure to please the eye.



English husbands used to give their wives money on New Year's Day to buy enough pins for the whole year. The custom disappeared after the invention of pinmaking machines.



## Letters To The Editor



in 80 column printers. I can speak only for the Seikosha GP-100A when used with the Memopak interface on the TS-1000. The problem, of course, lies in the printer's ROM.

In my early fumbblings, I tried changing the Dip Switch - without success. Reading the meager instructions in Memotech's pamphlet, I noticed the terminator "CHR\$ 155;CHR\$ 155". I know too little about printers to get much out of the owner's manual and anyway, I can't address it directly because of SINCLAIR VS. ASCII, which must be done by the I/F.

I decided to program my line feeds in and try the terminator to suppress LF from the printer ROM. It worked! In all my word programs, I define "L\$" by the line feed characters (I can't print graphics on the printer) and define "Z\$" as the terminator. This is so effective that when I LIST a program which defines Z\$, there is no linefeed after that line and the next line is printed to the right of it. It does do linefeeds represented by L\$, in any number asked for.

There is a problem, occasionally, at the end of a paragraph, or short address lines, when the "\$" after the "Z" does not get in the buffer at the same time, in which you get an error report C. This seems to occur most often when LEN string is an odd number. For this, I define "U\$" as one space, and use "IF (LEN P\$/2)<>INT(LEN P\$/2) THEN LET P\$=P\$+U\$". I'm not sure why it reduces the aborts.

also,

Last spring, after reading your review, I bought a Seikosha GP-100A printer package from Memotech. Now I am ready to buy a TS-2068. I have written Memotech to try to find out whether they plan to have an interface and cable so that I can continue to use the printer with my new computer.

Since you have one of the printers, I would appreciate any information you can give me on any arrangements you may have made to get the I/F and cable for yours, or

Dear Ed,

The following are modifications to enable SYNTAX to drive the CAI P40 printer. Enter the following lines:

```
399 GOTO 100
500 IF LM=0 THEN LET S$=""
510 IF LM=1 THEN LET S$=" "
520 IF LM=2 THEN LET S$=
" "
530 IF LM=3 THEN LET S$=
" "
540 IF LM=4 THEN LET S$=
" "
550 IF LM=5 THEN LET S$=
" "
560 LET P$=S$+B$
570 RAND USR 8192
580 RETURN
4321 GOSUB 500
4411 GOSUB 500
4452 LET P$=" "
4454 RAND USR 8192
```

Thank you for your work with synchro-Sette. Cordially - Terry Bavousett, Lubbock, TX

Dear Ed,

Just got around to reading page 15 of the September issue where you ask about self-generated line feeds

any other information.

Very Truly Yours, Austin White,  
Lexington Pk., MD

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Dear Austin,

I talked with Dick Govgatski of Menotech and found that they have no plans of making a printer interface for the 2068. As a matter of fact, they do not plan to support T/S computers at all in the future, except for the products they have already sold.

The problem for you (and many of us) is to find the proper interface device to connect the printer to the 2068. I have already connected the GP-100A to the Commodore 64 with a readily available interface, and it worked fine, except for the extra line generation problem you mentioned.

It seems to me that it should be easier to build an I/F for the 2068 than for the 1000 because it is ASCII encoded just like most other computers. The Menotech I/F contains a circuit that converts Sinclair code to ASCII. This isn't needed with the 2068 and possibly just a cable with the proper plugs on each end would suffice. This view is shared by Rick Barnett of Simply Sinclair (PO BOX 430, Woodridge, VA, 22194, (703) 494-3659, (703) 491-7242) who is working on such a device now. Also, Timex is rumored to have such a device in the works.

I'm sure, quite a few companies will soon be marketing a printer I/F for the 2068 soon. This same I/F should allow hookup, not only to the GP-100A, but all Centronics compatible parallel printers.

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Dear Ed,

As your readers move to the TS-1500 and 2000 computers, they may find they have no further use for their ZX-81 and TS-1000 equipment.

The students in my computer class

would be happy to receive this equipment and would acknowledge the gift with both a "Thank You" and a receipt for tax purposes, as we are a non-profit organization. I shall appreciate you mentioning this to your readers.

Sincerely, Ron Carrol, Teacher.

The Enterprise School  
1670 Chain Bridge Rd.  
McLean, VA, 22101

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The white dwarf star A.C.70 8247 is about 36 million times as dense as water. One cubic inch of matter from this star would weigh 650 tons.

(SYNTEXT Cont.)

printer is used.

#### - MAKING DUPLICATE COPIES

After the text is printed, a prompt will appear asking the user if a duplicate copy is needed. Entering "Y" or "N" will produce the desired results.

Some useful hints are:

- if you want to insert a block of text in existing text, use the SHIFT (E) command to create a gap large enough for the block to be inserted. The task of deleting the remaining unneeded spaces can be accomplished with SHIFT (D) and/or SHIFT (F).

This program has relatively fast key entry, but if you type too fast, characters may be skipped. The key-beep feature is a nice method of character entry verification. It is package #I-2301-C and is priced at 24.95 (25% off to subscribers).